# Loyola University Chicago

# ITS Major Initiatives – FY23 Q1-Q2

### **Academic and Faculty Support**

- LOCUS Enhancements (2)
- Customer Relationship Management System Pilot with SLATE
- Stritch School of Medicine Admissions
   System Replacement
- Faculty Administration Re-Architecture Strategy- FARS (8)
- Review and Evaluate Proposed Research Administration Solutions
- TAMS Evaluation and Implementation

### **Administrative Initiatives**

- COVID-19 Related Projects (1)
- Lawson/ Kronos Enhancements (4)
- Course & Curriculum Mgmt. (Courseleaf)
- Energy Management, Compliance, Mobile Enablement – Phase III (Archibus)
- Data Governance & Integrity
- Academic Program Plan Auto Discontinuation Process
- Implement Single Conflict of Interest Platform for University

### **Student Technology Support**

- EAB Navigate Phase II
- LDE Student Experience Lifecycle (PeopleGrove Mentoring: Main Hub, Sub Hubs for SSOM, SSW, Parkinson, MNSON)
- Financial Aid Award Letter Processes Aid Year 2023
- State Immunization Module Migration LOCUS to Health App
- Tuition Insurance Enhancements
- Implementation of Mobile Check-in for Wellness

#### Infrastructure

- Information Security Program (6)
- IT Disaster Recovery (5)
- Identity and Access Management Enhancements
- iParc Reader Replacement Chip and pin

### **Continuous Service Development**

- Advancement CRM Replacement
- LDE Transformation: Digital Assistant/ Chatbots (4)
- LDE Consumable Experience (Portal Pilot)
- Business Intelligence/ Data Warehouse (9)
- Enterprise Content Management (6)
- Graduate Student Progress System Assessment / Replacement

### **Research Computing Services**

- Natural Language Processing Innovation (cNLP)
- PCORI CAPriCORN 2022 Refresh
- Observational Medical Outcomes Partnership (OMOP) Data Mapping for CTSA/ITM
- Natural Language Processing (NLP) to Enhance Computable Phenotyping



"Loyola Digital Experience"

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**Health Legend** 

Green – On Target, No Risk

Lime - On Target, Minimal Risk, Minor Concerns, Under Control

Yellow – Target in Jeopardy, Risks Being Managed, Unknowns Exist

Orange - Slightly Off Target, Several Risks or Unknowns

Red - Off Target, High Risk, Multiple Concerns



# **ACADEMIC AND FACULTY SUPPORT**

LOCUS Enhancements (2)

Sponsor: Rita Vazquez, Robyn Mallett

Project Manager: Xiomara Franco, Dawn Fitzgerald

Health

Prior Current

**Institutional Impact**: Enhancements that improve service or increase efficiency for student and faculty services offered via the Student System (LOCUS).

**Recent Activity:** 1) Completed the deployment of the Campus Experience Mobile App. 2) Opened up the LOCUS Profile Tile to SSOM students for adding Permanent, Local, and Emergency Contact data. 3) Implemented a change in LOCUS so Unofficial Transcripts are no longer held for students even when there is a financial related debt.

**Next Steps:** 1) Complete PeopleSoft PUM Update to version 26. 2) Add Course Leaf Catalog System Integration with LOCUS. 3) Add Slate to LOCUS Table Load for New Graduate Program.

LDE Consumable Experience: CRM System Pilot with SLATE

Sponsor: Karen Berg, Jennifer Boyle Project Manager: Heather Chester



Health

rior Current

**Institutional Impact**: School-based CRM pilot for communication and data management with employers, research sites, students and other constituents. An enterprise CRM platform offers a consistent experience and creates a single platform with which the University can capture, share and report on participation and engagement.

**Recent Activity:** 1) Gathered requirements and completed initial testing for MNSON and Arrupe. 3) Data Cleansing planning and normalizing the data underway for MNSON. 4) Data Integration with the BI Team underway.

**Next Steps:** 1) Finalize data cleansing with both Arrupe and MNSON. 2) Confirm data integration schedule and test data transfer. 3) Finalize workflow, communication requirement gathering for both MNSON and Arrupe.

Stritch School of Medicine Admissions System Replacement Sponsor: Darrell Nabers Project Manager: Kelly Pearce Health

New

Current

**Institutional Impact**: The current SSOM Admissions System (STARRS) is not fully supported by AMCAS and is not able to provide effective historical reporting. Benefits include:

- Continuous data collection for historical reporting and decision making
- Alignment with annual changes of AMCAS data to reduce IT manual efforts
- Reduce the amount of manual and duplicate business efforts with increased integration and continuity

Recent Activity: 1) RFI & RFP completed. 2) ZAP AMP solution selected. 4) Contract negotiation in progress.

Next Steps: 1) Execute Agreement. 2) 2<sup>nd</sup> SOW for Historical Data transferred to AMP. 3) Implementation & Training.

Faculty Administration Re-Architecture Strategy–FARS (5) Sponsor: Badia Ahad Project Manager: Warren Francis Health

Current

Prior

**Institutional Impact:** Support One Loyola with a single Faculty review and administration system. This system will interact with all other third party systems and create a single method to interact with backend systems.

**Recent Activity:** 1) ITS and Faculty Affairs working to standardize HSC integration into F180 and the log-in credentials across all faculty. A solution was determined that draws from both Lawson and Workday IDs. 2) OIE launched the annual review process across units. 3) Interfolio loaded Digital Measures attachments into the F180 DEV environment.

**Next Steps:** 1) Onboarding for new OIE staff. 2) OIE will finish uploading the Smart Evals course evaluation scores. 3) Load SSOM faculty into F180 to test sample FIS roll-up data. 4) OIE to verify DM attachments were loaded properly.

# **ACADEMIC AND FACULTY SUPPORT, cont'd**

Review and Evaluate Proposed Research Administration Solutions

Sponsor: Dr. Sonny Singh Project Manager: Jim Sibenaller Health

Prior Current

**Institutional Impact:** A single Electronic Research Administration (ERA) system will increase efficiency, security and ease-of-use, as well as consolidate two legacy, custom-developed platforms that no longer meet our needs.

Recent Activity: Project kickoff is being prepped.

Next Steps: 1) Determine project team. 2) Document the requirements. 3) Issue RFP.

TAMS Evaluation and Implementation

Sponsor: Lorna Finnegan

Health

Project Manager: Warren Francis

New Current

**Institutional Impact:** This new system will automate MNSON faculty leadership to collectively manage teaching assignments and workload and will also allow faculty to provide input on their assignment preferences.

**Recent Activity:** 1) MNSON working on data onboarding sheets. 2) Instructors setup complete. 3) Course Catalog near complete. After data is loaded and the instance of TAMS is setup, course assignments will be created. 3) Training held on 9/27/2022.

Next Steps: 1) Complete data loads for course offerings.

**Digital Badging Solution** 

Sponsor: Robyn Mallett

Project Manager: Diane Haberkorn

Health

Prior Current

**Institutional Impact**: Digital badges and micro-credentials are increasingly used to recognize non-degree professional development competencies. They provide evidence that learners can demonstrate specific skills. Digital badges/micro-credentials will increase the competitive value and recognition of non-degree based credentials offered by Loyola.

**Recent Activity:** 1) Credly selected to pilot. Pilot will proceed with Executive and Professional Education Center (EPEC) for academic non-credit, and with OOL & ITRS for faculty & staff professional development.

Next Steps: 1) Contract review. 2) Begin pilot preparations.

# **ADMINISTRATIVE INITIATIVES**

COVID-19 Related Projects (1)

Sponsor: Tom Kelly Project Manager: Jim Sibenaller Health

Current

Prior

**Institutional Impact:** This group of projects is driven and prioritized by requirements to open campus, manage compliance, enable teaching, learning and working continuity, and automate business processes.

Recent Activity: 1) Data management for block drop processing, online only students, vaccine uploads and testing compliance. 2) Migrated relevant COVID-19 website information to a Health and Well-Being website.

Next Steps: 1) Complete the operational transition of remaining activities.

Lawson/Kronos Enhancements (4)

Sponsor: Danielle Hanson, Becky Gomez Klein Project Manager: Mary Bunker

Health

Prior

Current

Institutional Impact: Ongoing improvement projects for Enterprise resource planning (ERP) software which includes Budgeting and Planning, HR, Payroll, Accounting, Grant Management, Supply Chain and Expense Management.

Recent Activity: 1) Enhanced the employee feed for Egencia Travel Management application. 2) Completed fully automating the purging of job and report history in Lawson production environment. 3) Modified the AP DocFinity/Lawson interface to handle the Year-End invoice dates. 4) Applied configuration changes and patches to remediate the security vulnerabilities in Kronos and Lawson.

Next Steps: 1) Develop an automated process to distribute the employee terminations report via ISM tickets generated daily to ITS teams responsible for removing users' access. 2) Develop automated process to import WorkBright data for newly hired employees. 3) Support Finance with business process analysis and recommendation for alternatives regarding incoming cash receipts that are not easily identified to which department they "belong". 4) Business process analysis and recommendation for alternative for recording credit cards cash receipts to the appropriate department in Lawson. 5) Implement Intellias' Benefits Add-ins Module #35 -- Benefit enrollment Audit reporting. 6) Evaluation and analysis of proprietary and open-source Automated Testing tools for Lawson, Kronos, and other systems.

Course and Curriculum Management (CourseLeaf)

Sponsor: Robyn Mallett Project Manager: Heather Chester Health

Prior Current

Institutional Impact. Enables a university-wide catalog (for course offerings, degree/program requirements, learning outcomes, and academic policies for all or most schools) that is updated, published, and archived. Additionally, it offers electronic curriculum review/approval workflow that retains a full history of changes, eliminating paper/pdf forms.

Recent Activity: 1) Phase I and Phase II Business Requirements are completed. 2) Official Implementation Kickoff with Courseleaf Implementation team completed.

Next Steps: 1) Onsite consultations scheduled for October 6th and 7th. 2) Sign off application requirements Oct 24th. 3) Vendor will complete technical build out and requirements in October/November. 4) User-Acceptance Testing (UAT) to begin in December. 4) PeopleSoft integration and SSO target completion by November.

Energy Mgmt, Compliance, Mobile Enablement – Phase III (Archibus)

Sponsor: Kana Henning Project Manager: Warren Francis Health

Prior

Current

Institutional Impact: Provide a real-time single source of truth for all space inventory and utilization data at LUC. The new system will become the planning tool for building programming, space assignments, and campus development.

Recent Activity: 1) Facilities team completed UAT testing. 2) The vendor addressed an issue regarding upload connection errors. 3) JLLT onsite for mobile application review and support.

Next Steps: 1) Complete user training. 2) Complete project by the end of October.

# **ADMINISTRATIVE INITIATIVES, cont'd**

Data Governance and Integrity

Sponsor: Susan Malisch, Winifred Williams, Teresa Krafcisin, Margaret Callahan Project Manager: Tony Vavarutsos

Health
Prior Current

**Institutional Impact:** Address data integrity issues that exist within and across systems. Data needs to be validated and sources of truth defined. Good data enables effective service to students and enables efficient operations.

**Recent Activity:** The Data Governance Steering Committee is currently focusing on the following initiatives; 1) mobile phone numbers for students, faculty & staff, 2) improved data definitions within the data dictionary, 3) data retention policy review/update, and 4) data governance roles and policies.

**Next Steps:** 1) Train and provide expanded access to the data dictionary. 2) Continue work on solution for student/faculty/staff mobile phone numbers and student local address. 3) Interview committee members on data challenges and successes.

Academic Program Plan Auto Discontinuation Process

Sponsor: Rita Vazquez Project Manager: Nalin Patel Health

New Current

**Institutional Impact**: Establishing a sustainable discontinuation process is necessary to achieve and maintain the integrity of student data in LOCUS. Clean/accurate data will positively impact downstream systems and processes that rely on LOCUS student data.

**Recent Activity**: 1) This project has not yet started. It has been prioritized with the project sponsor within the queue of other requests.

Next Steps: 1) Schedule a requirement gathering meeting with Sponsor and determine implementation timeline.

Implement Single Conflict of Interest Platform for University

Sponsor: Dr. Sonny Singh Project Manager: Lydia Robertson Health

Current

New

**Institutional Impact**: Streamline and combine conflict of interest disclosure processes across the University to enable enterprise efficiencies and document disclosure information and potential conflicts of interest and conflicts of commitment in alignment with the NPSM-33 federal directive.

**Recent Activity:** 1) Finalized the current state workflow for LSC & HSC applications. 2) Drafted the future state design, under review.

Next Steps: 1) Finalize the Finance/SPA requirements in relation to future state. 2) Begin application consolidation.

### STUDENT TECHNOLOGY SUPPORT

EAB Navigate Phase II

Sponsor: Paul Roberts

Project Manager: Xiomara Francis / Dawn Fitzgerald

Health

Prior Current

Institutional Impact: Navigate is a student success platform that enhances communications between advisor and student and provides tools for academic planning. Later phases may allow direct enrollment from Navigate into LOCUS.

Recent Activity: 1) Advising Notes Interface to LOCUS – sponsor will assess whether this remains a necessary effort. 2) Arrupe College – In progress; vendor has loaded Arrupe student data into test environment; ready for UAT with Arrupe staff. 3) Contract renewal.

Next Steps: 1) One-Click Registration – Work with EAB to resolve issues identified during April pilot and ways to conduct load testing ahead of next registration cycle. 2) Meeting with a partner institution (NIU) to discuss the effort of load testing and one click registration on October 14. 3) Arrupe College - Complete UAT and deploy to production.

LDE Student Experience Lifecycle: PeopleGrove Mentoring

Sponsor: Paul Roberts, Karen Paciero, Susan Malisch Project Manager: Diane Haberkorn



Health

Prior

Current

Institutional Impact: An enterprise-wide solution for managing various mentoring programs ensures consistent user experiences for mentors and mentees, facilitates opportunities for mentoring across disciplines, and improves engagement, educational and professional outcomes for students, alumni, faculty, and staff.

Recent Activity: 1) LoyolaLinked (Central Hub) - Three new FTE resources joined the Alumni Relations team and are currently onboarding. 2) SSOM, PSHSPH, and SSW Implementations completed; currently in soft launch. Targeting full launch in February 2023. 3) MNSON implementation underway; targeting a soft launch in October. 4) School of Communication, School of Education, Arrupe College, and the Graduate School have entered the Discovery phase.

Next Steps: 1) Work with Alumni Relations to develop onboarding strategy & discovery phase requirements for School of Communication, School of Education, Arrupe College, and the Graduate School. 2) CAS will be engaged in October 2022 to begin discovery. 3) Pending Alumni Relations team onboarding, Central Hub go live target in February 2023.

Financial Aid Award Letter Processes – Aid Year 2023 Sponsor: Paul Roberts

Project Manager: Caroline Mwangi, Ivan Siap

Health

Current Prior

Institutional Impact: Each Financial Aid Awarding year, Financial Aid office has a set of recurrent operations that are used to process continuing and incoming students data. These processes include ISIR loads, related checklist processing, packaging, and award letters. The group of custom batch programs, which help to facilitate Award letter processing, are known at Loyola as the "Starting Line Up." These ensure that implemented changes are well understood, tested, and accounted for in our institution's processing logic, and in the various external data interfaces.

Recent Activity: 1) Support for HEERF4 (Higher Education Emergency Relief Fund) processing. Created, tested, and provided analysis of LOCUS VIEW of HEERF4-eligible students for processing. 2) FAPKGCMP (Packaging of Rating Components) process support. This customized baseline process was debugged, a workaround identified, developed, tested & implemented. A long-term solution was also identified and is currently awaiting UAT sign-off. 3) Revisions for existing Navigation Collections and addition of 2023 Aid Year. Navigation collections provide groupings of Financial Aid contents stored in the portal registry, 4) Testing, & assistance in installation of Federal Regulatory releases (PRP) and associated customizations (FA5B&C Verification edits, FA9E COD Loans); State Grants (FA12 Illinois MAP Grant); and Institutional Grants (Returning Ramblers, GRAD Discount).

**Next Steps:** Continue to monitor the performance of the various award Letter processes.

State Immunization Module Migration-LOCUS to Health App Sponsor: Joan Holden Project Manager: Aine McDonagh Health

Current

Institutional Impact: The goal of this project is to move all immunization data into the Health App. This will facilitate users to access data for verification in one location; improves ease of use, workflow, and reduces errors.

Recent Activity: 1) Web Dev team met with the Wellness Center to discuss requirements for the project.

Next Steps: 1) Internal technology meetings to coordinate changes affecting Student system and reporting needs.

# STUDENT TECHNOLOGY SUPPORT, cont'd

Tuition Insurance Sponsor: John Campbell Health
Enhancements Project Manager: David Kessler New Current

**Institutional Impact**: These project enhancements are needed for the purpose of improving the current customer service available to the impacted population.

Recent Activity: 1) Project Scope document was developed and approved.

Next Steps: 1) Start work on technical specifications.

Implementation of MobileSponsor: Joan HoldenHealthCheck-in for WellnessProject Manager: John McGivneyNewCurrent

**Institutional Impact:** Check-in solution (replacing open check-in kiosks) for Wellness Center patients; Consent solution (replacing signature pads) for treatment of patients.

**Recent Activity:** 1) Working with the vendor to complete all necessary setup. 2) Hardware setup and maintenance is being discussed within the department as this project requires use of iPads. ITS is working to establish a procedure that looks at security, maintenance, hardware, and application support across the University and the multiple locations where this check in process will be used.

**Next Steps:** 1) Establish a procedure which can be used across departments for iPads support. 2) Complete Mobile Check-In and e-Consent implementation.

# **INFRASTRUCTURE**

#### Information Security Program (6)

Sponsor: Susan Malisch Project Manager: Jim Pardonek Health
Prior Current

**Institutional Impact:** Continue risk mitigation and management associated with the confidentiality, integrity and availability of University protected and sensitive information.

#### **Recent Activity:**

<u>Awareness</u> – The Fall FY23 Information Security Awareness training began on 7/1 & completed on 9/30. Adjunct and new hire training started on 9/19 with a 4-week completion window. Student training has been discussed with Student Development and is pending direction from DSD. Phishing assessment and activities planned for Cyber Security Awareness Month in October.

<u>Compliance</u> – PCI-DSS compliance effort completed. Annual penetration testing for PCI and applications completed with identified deficiencies being prioritized. HIPAA gap assessment also completed and under review.

<u>Risk Reduction</u> – Evaluation of products for Endpoint Detection and Response underway. Server "hardening" and vulnerability management treatments continues. Endpoint Detection and Response (EDR) solution evaluation underway. 3rd party security performance management application implemented.

**Next Steps:** 1) Ongoing security awareness and phishing assessments. 2) Continue server hardening and PII Program. 3) Promote Last Pass. 4) Implement Risk Assessment treatments.

#### IT Disaster Recovery (5)

Sponsor: Margaret Callahan, Tom Kelly, Susan Malisch Project Manager: Jim Sibenaller Health
Prior Current

Institutional Impact: Timely restoration of key University technology services in the event of disaster or severe outage.

Recent Activity: The DR program for 2022 continues to be deferred due to resource constraints. Likely start Q2 FY23.

Next Steps: 1) Establish current state of the program. 2) Launch plan review process. 3) Test all systems/applications.

LDE Foundation: Identity and Access Management (IAM) Enhancements

Sponsor: Susan Malisch
Project Manager: Diane Haberkorn



Health

Current

**Institutional Impact:** Improvements to Loyola's IAM System are required to automate access management to applications and services. As roles within the University change and evolve, our IAM system should transition a person's access with minimal administrative intervention and without disruption. Once complete, application access will automatically transition as an individual's role changes, minimizing unauthorized access risk and improving productivity.

Recent Activity: 1) Completed RFP, reviewed final version with Gartner, and issued to our selected vendors.

**Next Steps:** 1) RFP responses were due from selected vendors on 10/14. 2) Review RPF responses. 3) Present recommendation to the ITS Architecture Review Board.

# LDE Consumable Experience: ITS Portal Pilot

Sponsor: Jim Sibenaller Project Manager: Kelly Pearce



Health
Prior Current

**Institutional Impact:** This pilot is expected to validate features and functionality for a Loyola-wide portal experience, where content is tailored to each student, faculty, or staff.

**Recent Activity:** 1) Gathered several requirements and use cases from the pilot constituents including single sign-on & mobile capabilities. 2) Began using the Jahia platform to pilot and validate the portal features and functionalities. 3) Project paused due to key resource departure/resource constraints, moved project to Lime status.

**Next Steps:** 1) Review project restart plan with the CIO and Architecture Review Board.

### CONTINUOUS SERVICE DEVELOPMENT

Advancement CRM Replacement

Sponsor: Susan Malisch, Karen Paciero Project Manager: Diane Haberkorn

Health

Prior Current

**Institutional Impact**: Replace current solution to provide contemporary functionality and enhanced relationships with the Loyola Alumni community. The new system will support Advancement as they prepare for a new capital campaign.

**Recent Activity:** 1) RFP Completed and final vendor selected. 2) Currently completing Contract negotiations and preliminary implementation planning. Targeting November 2022 for final signatures.

Next Steps: 1) Pending final contract, ongoing implementation planning and execution.

LDE Transformation: Digital Assistant / Chatbots (4)

Sponsor: Susan Malisch Project Manager: Kelly Pearce



Health
Prior Current

**Institutional Impact**: Increase administrative efficiencies and improve service to students, faculty and staff using Digital Assistants or "Chatbots". Answers to most frequently asked questions are self-service & available 24/7.

**Recent Activity:** 1) Deployed Review/Reminder Emails, Thumbs Up/Thumbs Down & Feedback functionality into Production. 2) Established a process to identify & report on Ratings Gap in Knowledge. 3) Teamed with Intrasee to create a Glossary of ChatBot definitions.

#### **Utilization Metrics:**

- Growth rate 25%, from 15,739 conversations in Q4 FY22 to 19,607 conversations in Q1 FY23
- Q1 FY23 Users mainly access the Chatbot (LUie) from LOCUS (39.1%), luc.edu (23.3%), ResLife (13.1%), Bursar (12.8%) and Health & Wellbeing (8.7%).
- Over 9,300 questions across a variety of topics; the most popular content areas through August 2022 have been Residence Life, Academics and Chatbot Help.

**Next Steps:** 1) Weekly Ratings transition to the functional department SMEs. 2) Add Content for other student related topics for Registration & Records, Admissions and Graduate students. 3) Enhance Content for Student Academic Advising. 4) Add Content for faculty/staff related topics: Finance and HR.

Business Intelligence / Data Warehouse (9)

Sponsor: Margaret Callahan, Wayne Magdziarz, Susan Malisch Project Manager: Tony Vavarutsos

Health

Prior Current

**Institutional Impact:** Inform planning and strategic decisions at Loyola with new visualizations, reporting and data analyses using enterprise data that is more easily accessible and consumable.

#### **Recent Activity:**

- Started the Unified Research Dashboard project to consolidate HSC & LSC data sources into a single repository.
- Re-engaged with LMS Learning Analytics team to reach out to instructors with availability of their course analytics.
- Finalized the data interfaces for the new F180 faculty system.
- Continuing development of HR Metrics data model as guided by HR.
- Re-engaged with HSC staff to pull the SSOM applications, registration and academic data into Data Warehouse.
- Officially launched the WebFOCUS report conversion project with all of our clients.

**Next Steps:** 1) Complete the HR Metrics data model. 2) Complete Phase 3 Learning Analytics framework. 3) Continue WebFOCUS report conversion and the Research, HSC/SSOM data consolidation projects.

Enterprise Content Management (6)

Sponsor: Susan Malisch Project Manager: Mary Bunker Health

Prior Current

Institutional Impact: Improve/streamline student services & interdepartmental process efficiency while reducing paper.

**Recent Activity:** 1) Completed projects: Replacement of legacy Visual Basic import script to download, extract, import, and index documents into DocFinity. 2) Active projects include: Wellness Center – COVID19 Immunizations, School of Law document repository, adding MFA for DocFinity Authentication, Workbright/Lawson/DocFinity API.

**Next Steps:** 1) Obtain User Acceptance Testing sign-off on active projects. 2) Implement process to purge deleted documents regularly.

# **CONTINUOUS SERVICE DEVELOPMENT, cont'd**

Grad Student Progress System Assessment/Replacement

Sponsor: Emily Barman
Project Manager: Aine McDonagh

Health

New Current

**Institutional Impact**: Identify a long term solution to support the management of graduate student progress through degree requirements and the growth of graduate programs outside of the Graduate School.

**Recent Activity:** 1) Initial meeting with sponsor to review, discuss and document current state, 2<sup>nd</sup> meeting scheduled.
2) Project delayed due to key resource departure/resource constraints within ITS, moved project to Lime status.

Next Steps: 1) Review resource constraints within ITS and create a project restart plan.

# RESEARCH COMPUTING SERVICES

Natural Language Processing Innovation (cNLP)

Principle Investigator: Dr. Kathy Bobay Assigned: Ron Price, Jason Boyda Health
Prior Current

**Institutional Impact:** Electronic health record (EHR) narrative notes contain rich data about patient care and comprise approximately 80% of the EHR's content. These data are difficult to access and analyze without tedious and costly manual chart reviews. Loyola's new clinical natural language processing (cNLP) and clinical inference engines eliminate the barriers of previous cNLP products, namely lack of near real-time performance and the need for extensive hardware and technical expertise. These innovations can be used in real-time, in a wide range of use cases including, but not limited to: care coordination/population health; quality improvement; clinical decision support; and research.

**Recent Activity**: 1) Met with teams from Memorial Sloan Kettering and Beaumont/Spectrum Health and began negotiation of research collaboration license agreements. 2) Completed development of graphical user interface (GUI) applications (version 1.0) for Configuration Management and Knowledge Map Building. 3) Presented cNAE/cNIE technologies at the 2022 Chicago Informatics Data Jam Conference.

**Next Steps:** 1) Work with external attorneys to define needed research collaborator license. 2) Continue discussions with the SOURCE Consortium regarding software license for its member institutions. 3) Deliver version 1.0 of cNLP software suite to first licensees.

#### PCORI CAPriCORN 2022 Refresh

Principle Investigator: Dr. Francis Weaver Assigned: Ron Price

Health
Prior Current

**Institutional Impact:** The Patient Centered Outcome Research Institute (PCORI)/CAPriCORN 2022 Clinical Data Repository (CDR) is a large-scale clinical data repository that is refreshed or updated quarterly and conforms to PCORI's Common Data Model (CDM) version 6.1. The CDR serves as the basis for a number of clinical studies including those operational on the national PCORnet network and specialized studies. The CDR also supports local CAPriCORN collaborations amongst Chicago's academic medical institutions.

Recent Activity: 1) Completed CY2022 Q2 data repository refresh. 2) Completed empirical data characterization (EDC) scripts and quality assurance analyses. 3) Performed QA SQL cohort script review for CAPriCORN central.

Next Steps: 1) Review current PCORnet data model (v 6.1) to assess potential gaps in needed data for the initial ITM LEAF data repository. 2) Plan initial extract-transform-load (ETL) processes required for LEAF project.

Observational Medical Outcomes Patrnership (OMOP) Data Mapping for CTSA/ITM

Principle Investigator: Dr. Elaine Morrato Assigned: Ron Price

Health

Prior Current

Institutional Impact: The Observational Medical Outcomes Partnership (OMOP) data repository project is part of an on-going effort supported by NIH's Clinical and Translational Science Awards (CTSA) through an award to Loyola from University of Chicago's Institution for Translational Medicine (ITM). The primary goal for Loyola's deidentified OMOP-based clinical data repository is for it to support a clinical research patient cohort discovery application built by the University of Washington called "LEAF". The operational repository will be refreshed quarterly, and the LEAF application will operate in a "federated" manner allowing researchers to discover patient cohorts across participating ITM institutions (currently University of Chicago, RUSH and Loyola). This is a long-term development effort, and LEAF is expected to be fully operational in calendar year 2023.

**Recent Activity**: 1) ITM OMOP/LEAF implementation committee reformed with renewed CTSA funding. 2) ORS Contracts continues to work on required ITM MOU data use agreement. 3) Sue Zelisko (Loyola ITS, ICR) selected to lead ITM Informatics OMOP efforts. 4) Verified that LEAF environments are current.

**Next Steps:** 1) Post MOU execution, plan historical deidentified data load into OMOP repository. 2) Review definitions of all OMOP "core concepts". 4) Plan OMOP/LEAF roll-out schedule.

Natural Language Processing (NLP) to Enhance Computable Phenotyping

Principle Investigator: Dr. Kathy Bobay Assigned: Ron Price

Health

Prior

r Current

**Institutional Impact:** Natural language processing (NLP) of clinical narratives (e.g., notes, reports, etc.) enables a broader range of electronic health record (EHR) data to be utilized in clinical research and clinical decision support (CDS) activities. Data produced from large-scale clinical NLP efforts are de-identified and can be utilized across a range of analytic processes, including traditional biostatistics, computable phenotyping and machine learning processes (e.g., Al, deep networks, traditional neural networks, convolutional neural networks, etc.).

**Recent Activity**: 1) New project with MNSON faculty (Drs. P. Friend/K. Bobay) and graduate student (H. Joehl) to assess end-of-life (EOL) goals of care planning activity using cNLP. 2) Progress on updated social determinants of health (SDoH) knowledge dataset by M. Rao (889 of 1,000 note annotations). 3) Began development of a "functional status" knowledge dataset. 3) Engaged with Marshall Gerstein and campus partners to develop a collaborative licensing agreement with external parties.

**Next Steps:** 1) Complete update of SDoH data review and assess performance of new SDoH knowledge map (KM). 2) Meet with ITM (University of Chicago) researcher S. Tilmon on potential asthma cNLP phenotype collaboration. 3) Complete paper submission on cNAE/cNIE innovations to the Journal Applied Clinical Informatics. 4) Complete collaborative licensing agreement; advance collaborations.